8-1997

Kentucky Warbler (Vol. 73, no. 3)

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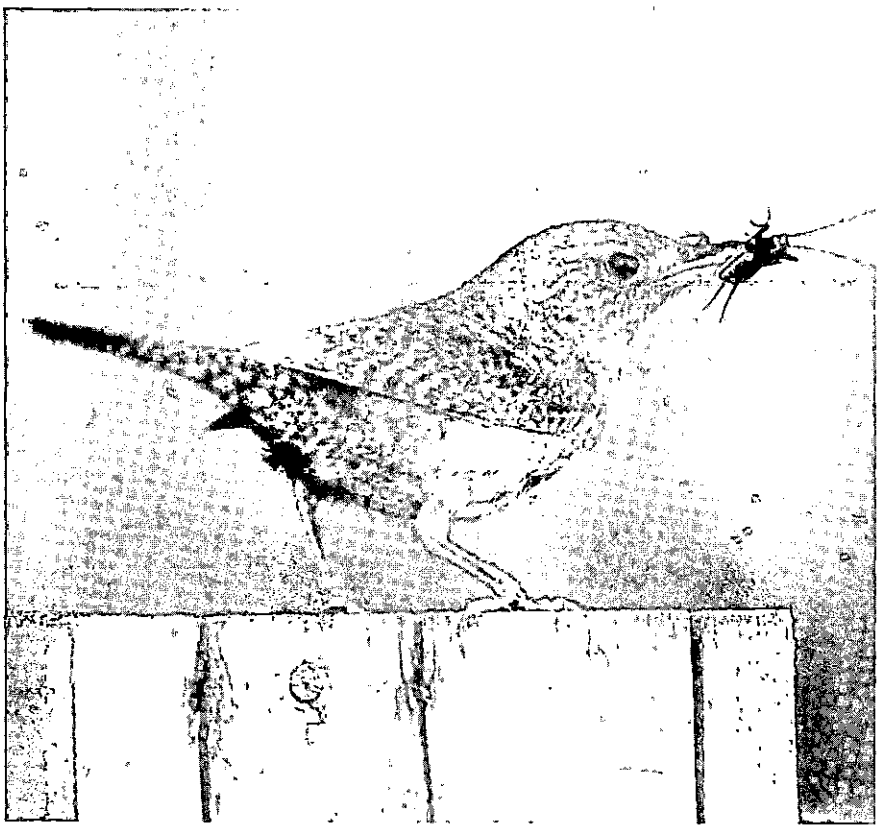
The Kentucky Warbler

(Published by Kentucky Ornithological Society)

VOL. 73 AUGUST 1997 NO. 3



IN THIS ISSUE

THE KENTUCKY ORNITHOLOGICAL SOCIETY

THE KENTUCKY WARBLER

Organ of the Kentucky Ornithological Society, published quarterly in February, May, August and November. *The KENTUCKY WARBLER* is sent to all members not in arrears for dues. Membership dues are: Active or Regular $8.00; Contributing, $15.00; Student $4.00; Life, $100.00; Family, $2.00 in addition to Regular, Contributing or Life Membership dues; Corporate. All articles and communications should be addressed to the editor. Subscriptions, memberships and request for back issues should be sent to the Treasurer.

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Bowling Green, 42101

THE COVER

Thanks go to Philippe Roca for the cover photograph of a House Wren, *Troglodytes aedon.*

THE SPRING SEASON, 1997

Fred M Busroe

This season has been one of extremes, record rainfall to start the month of March (Louisville had 12+ inches in 36 hours) then record flooding in much of central Kentucky. March was the third wettest month on record. Snow showers occurred April 13 with the average temperature 15 degrees below normal.

The transient lakes, McElroy and Chaney, in Warren County were filled during the season and had some unusual species and large numbers of others. Cinnamon Teal, Tufted Duck and at least three Eared Grebes were seen during March and April.

The cold weather seemed to slow down normal movement, however most observers rated the warbler movement as good.

Abbreviations: Aud = Audubon State Park, Henderson County; AJJ = A.J. Jolly Park, Campbell County; BARN = Barren River State Park, Barren County; Bar = Barkley Dam, Lyon County; BarL = Barkley Lake, Lyon County; Ber = Berea, Madison County; Bern = Bernheim Forest, Nelson County; BBP = Big Bone State Park, Boone County; BNP = Beargrass Nature Preserve, Jefferson County; BCNP = Boone County Cliffs Nature Preserve; Bon = Bondurant, Fulton County; Burl = Burlington, Boone County; CEL = Camp Ernst Lake, Boone County; Cha = Chaney Lake, Warren County; CL#4 = City Lake #4, Hopkins County; Cra = Craig's Creek, Carroll County; CKWM = Central Kentucky WMA, Madison County; Doz = Dozier Lake, Hopkins County, EBP = East Bend Power Plant, Boone County; Falls = Falls of the Ohio, Jefferson County; Fer = Ferry Farm, Butler County; FtT = Fort Thomas, Campbell County; Ful = Fulton County; Ghe = Ghent Power Plant, Carroll County; Hic = Hickman Bottoms, Fulton County; Jon = Jonathan Creek, Marshall County; KYL = Kentucky Lake, Marshall County; KOS = Kentucky Ornithological Society; LPew = Lake Pewee, Hopkins County; LBL = Land Between the Lakes; Lau = Laurel County; Len = Lentz Pond, Jefferson County; Mad = Madisonville, Hopkins County; McEl = McElroy Lake; Warren County; MCNP = Mammoth Cave National Park, Edmonson County; Mar = Markland Dam, Gallatin County; Mel = Meldahl Dam, Bracken County; Mid = Middle Creek Park, Boone County; MCFH = Minor Clark Fish Hatchery, Rowan County; Mis = Mississippi River, Carlisle County; OLL = Outer Loop Landfill, Jefferson County; Pet = Petersburg, Boone County; Pul = Pulaski County; Saw = Tom Sawyer State Park, Jefferson County; Silo = Silo Overlook, Lyon County; Sil = Silver Grove, Campbell County; Slo = Sloughs WMA, Henderson; Swif = Swift's Camp Creek Trail, Red River Gorge, Wolfe County; UK = University of Kentucky farm, Fayette County; War = Warsaw Sewage Plant, Gallatin County; Wav = Waverly Park, Jefferson County; West = Westvaco WMA, Carlisle County; Wol = Wolper Creek, Boone County.

Common Loon - Three on 20 March at LBL (CP); one on 26 March near Ber (AT, TR); six on 2 April on Lau Lake (CB); one on 14 April at CEL (LMc); one on 27 April at Mar (LMc).

Pied-billed Grebe - seven on 27 March at CL#4 (JWH); 26 on 11 April at Hic (CP).

Horned Grebe - Two on 20- March at Lake Reba near Ber (AT, TR); one on 29 March at Mel (LMc); one on 5 April at CEL (LMc); two on 10 April in Meade County (FR).

Eared Grebe - One in winter plumage on 20 April at Mel (FR); one to three at McEl during March and April and on KOS field trip (DR, many observers).

American White Pelican - 55 on 20 March, 59 on 2 April and five on 11 April at Hic (CP).

Double-crested Cormorant - 18 on 2 April on Mis (CP); 60 on 9 April at Falls (FR); 40 on 11 April at Falls (FR); eight at Falls and 84 at Slo on 18 April (JB, PB); 59 on 24 April at Hic (CP); 60 + on 9 May above Mar (LMc); 17 on 10 May on Ohio River, Boone County (LMc).

American Bittern - One on 24 April near Pet (LMc); one on 17 May near EBP (LMc).

Great Blue Heron - 62 on 11 April at Hic (CP); as high as 40 at MCFH during April (FB).

Great Egret - Nine on 2 April and 100+ on 9 May at Hic (CP); three on 19 April at LBL (JB, PB); one on 10 May at EBP (LMc).

Snowy Egret - One on 9 May at Hic (CP).

Little Blue Heron - Two on 24 April at Hic (CP).

Cattle Egret - Six on 3 May near Hic (CP); two on 9 May at Hic (CP).

Green Heron - 27 on 17 May at farm pond near Mad (JWH).

Black-crowned Night-Heron - 90 on 9 April and 100+ on 11 April at Falls (FR); one on 6 May at Saw (JB, PB); two on 11 May at Bar (Hap, CP).

Greater White-fronted Goose - One at McEl from 3 to 9 March (DR).

Snow Goose - Present through 15 April at McEl (DR)

Ross' Goose - One on 7 March at MCFH (FB, LK).

Wood Duck - Four to six from 11 to 15 March at Fer (CT, DT).

Green-winged Teal - Six to eight were present during March near Pet (LMc); 90 on 2 April near Bon (CP); four on 6 April at Cha (DC, JB, PB); nine on 12 April at Slo (JB, PB).

Blue-winged Teal - 10 on 31 March at UK (WD); rather common in Campbell and Bracken counties during April (FR); 150 on 12 April at Slo (JB, PB).

Cinnamon Teal - One was seen by many observers on 20 April at McEl (reported by JB, PB, PB, CL, DR).

Northern Shoveler - 11 on 27 March at Mel (FR); 20 on 12 April at Slo (JB, PB).

Tufted Duck - Many observations during March and April at McEl (reported by

JB, PB, DC).

Gadwall - Four on 6 April at McEl (JB, PB, DC).

American Wigeon - Five on 2 April at Mel (FR); 4 on 12 April at Slo (JB, PB).

Canvasback - 12 on 1 March at Mel (FR); one male at MCFH during the entire period (FB).

Redhead - 15 on 2 March at Mel (FR); four on 20 April at McEl (JB, PB, CL).

Ring-necked Duck - 20 on 1 March at Mel plus 20 on Ohio River at Campbell County (FR); 30 on 15 March at Len (JB, PB); 60 on 20 March at Mel (FR).

Lesser Scaup - 120 on 20 March at Mel (FR); 60 on 27 March at Mel (FR).

Scaup spp. - Raft of 60 on Lau Lake on 2 April (CB).

Oldsquaw - Two on 23 March at Mel (FR).

Bufflehead - Small numbers were present during March in northern Kentucky (LMc); two on 27 March at CL#4 (JWH).

Red-breasted Merganser - One m. and one f. on Lau Lake on 2 April (CB); one to four were present on 5 April at EBP and Ohio River, Boone County (LMc); two on 11 April at KYL (CP).

Ruddy Duck - 16 on 10 March at CL#4 (JWH); one to 13 were present 14 March to 15 April at CEL (LMc).

Black Vulture - Six on 35 April at Shakertown (WD); two on 9 May in Ful (CP; fairly widespread during the season in northern Kentucky (LMc).

Turkey Vulture - Most of the older roosts on Reelfoot Wildlife Refuge, Fulton County and near Murphy's Pond, Graves County seem to be abandoned or relocated (CP).

Osprey - One on 19 April at BBP (LMc); three on 19 April at LBL (JB, PB, CL); one at Mel on 22 April (FR); two nesting at Silo and two were nesting near the bridge BarL on 23 April (CP).

Mississippi Kite - Eight on 7 May in Fulton County (DR).

Bald Eagle - Two at an active nest site on 2 April at Hic (CP); two adults + two eaglets on 12 April at Slo (JB, PB).

Northern Harrier - Four on 20 March in Ful (CP); two on 2 April at a reclaimed stripmine in Lau (CB); one on 7 April at CKWA (WD).

Sharp-shinned Hawk - One on 4 May at BNP (JB, PB).

Cooper's Hawk - One in eastern Jefferson County on 14 March (JB, PB).

Broad-winged Hawk - One on 6 May at FtT (FR).

Red-tailed Hawk - Adult feeding young in nest on 19 April near Sil (FR); two young were fledged near Wol (LMc).

Peregrine Falcon - One on 26 and 29 April at McEl (DR).

Wild Turkey - Six on 2 April in Lau (CB); five on 19 April and two on 26 April at MCNP (JB, PB, CL); three on 3 May in Calloway County (CP).

King Rail - One at Slo on 12 April (DR).

Virginia Rail -- One on 12 April at Slo (DR).

Sora - Two on 6 May and one on 11 May at Sil (FR); one on 10 May at Pet (LMc).

Common Moorhen - One on 20 and 22 April at Cha (DR).

American Coot - Abundant in Hic and KYL during late season (CP); 91 on 20 March at LPew (JWH); 49 on 27 March at Doz (JWH); approx. 8,000 on 2 April at McEl (LK, SK).

Black-bellied Plover - three on 21 May at Open Pond, Fulton County (CP).

American Golden Plover - two on 20 April at McEl (JP, PB, CL); 200 + on 24 April at Hic (CP).

Semipalmated Plover - three on 20 April at Cha (JB, PB, CL); eight on 21 May at Hic (CP).

Killdeer - Nest with four eggs located on 29 March at AJJ (LMc); pair hatched four young on 8 April at Fer (CT, DT).

Greater Yellowlegs - 100+ on 29 March and 11 April at Hic (CP); seven on 12 April at Slo (JB, PB); 15 on 4 May at OLL (JB, PB).

Lesser Yellowlegs - 60 on 11 April at Hic (CP); seven on 26 April at OLL (JB, PB).

Solitary Sandpiper - One on 11 April in Ful (CP); four on 19 April at Slo (JB, PB); six on 10 May at EBP (LMc).

Spotted Sandpiper - Several single sightings on 11 April near Open Pond, Hic (CP); four on 4 May at the Falls (JB, PB); eight at Ghe and three at War on 9 May (LMc); two on 10 and 17 May at EBP (LMc); three on 18 May at CL#1 (JWH).

Semipalmated Sandpiper - 40 on 11 April near Open Pond, Hic (CP); 20 on 17 May at EBP (LMc).

Least Sandpiper - 80 on 11 April near Open Pond, Hic (CP); 25 on 9 May at Ghe (LMc); five on 17 May at EBP (LMc).

Pectoral Sanpiper - 12 on 6 April at Cha (JB, PB, DC); one on 10 April at CEL (LMc); 50 on 11 April at Open Pond, Hic (CP); 25 on 12 April at Slo (JB, PB); four on 9 May at Cra (LMc); 120 on 21 May in Ful (CP).

Dunlin - 16 with some in breeding plumage on 11 April at Open Pond, Hic (CP).

Stilt Sandpiper - On e on 11 April at Open Pond, Hic (CP); one on 4 May at Sen (JB, PB).

Common Snipe - Six on 29 March at Hic (CP); 20 on 6 April at Cha (JB, PB, DC); 15 on 12 April at Slo (JB, PB).

Bonaparte's Gull - 500 + on 20 March at Hic, very common in Bottoms this year, may be due to flooding of Mississippi River (CP); 10 on 29 March at Mel (LMc).

Ring-billed Gull - 200 + on 2 March, which is unusual at Hic (CP).

Thayer's gull - two on 28 March at KYL (DR).

Glaucous Gull - One at KYL on 28 March (DR); one on 13 April near Bar (Hap, CP).

Lesser Black-backed Gull - One at KYL on 28 March (DR).

Forster's Tern - Eight on 9 May at Cra (LMc); 12 on 11 May on KYL (Hap,

CP).

Least Tern - Four on 21 May at Hic (CP).

Black Tern - One on 9 May at Cra (LMc); 16 on 11 May on KYL (Hap, CP).

Black-billed Cuckoo - One at Central Park, Boone County on 17 May (LMc).

Yellow-billed Cuckoo - One on 6 May at Saw (JB, PB).

Eastern Screech-Owl - Nest with young was located on 17 May at Mid (LMc).

Great Horned Owl - Four (2 ad. and 2 imm.) on 11 April in Wav (JB, PB, CL); nest located on 15 April with two young present until 28 April at the Greater Cincinnati Airport, Boone County (KC).

Barred Owl - One on nest on 15 March and one young seen on same nest on 4 May at Wav (JB, PB, CL); a nest was located on 19 April, one young bird was present until early May at Mid (KC).

Chuck-will's-widow - One at BARN on 24 April (AR, TR).

Chimney Swift - First reported on 12 April at Slo (JB, PB).

Ruby-throated Hummingbird - One on 19 April at LBL (JB, PB, CL).

Yellow-bellied Sapsucker - One on 15 April in Jefferson County and three at Aud on 12 April (JB, PB).

Yellow-bellied Flycatcher - One on 26 and 27 May at Ber (AR, TR).

Willow Flycatcher - One seen on 10 and 26 May near Pet (LMc); one to three at MCFH during late May (FB).

Least Flycatcher - One on 26 and 27 May at Ber (AR, TR).

Eastern Phoebe - Nest with four eggs located on 12 April at Mid (LMc).

Great Crested Flycatcher - One on 4 May at BNP (JB, PB).

Eastern Kingbird - 21 on 9 May along levee at Hic (CP).

Horned Lark - 18 on 20 March at Hic (CP); two on 2 April in Lau (CB); three on 20 April at McEl (JB, PB, CL); two in eastern Jefferson County on 4 May (JB, PB).

Purple Martin - Six on 2 April at nest gourds in Sil (FR); six on 12 April at Aud (JB, PB).

Tree Swallow - 500+ on 11 April near Hic and 200 + on 13 April at Jon (CP); 100 on 12 April at Slo (JB, PB).

Northern Rough-winged Swallow - 50 on 11 April near Hic (CP); 100 on 12 April at Slo (JB, PB).

Bank Swallow - Two on 3 and 10 May in Jefferson County (JB, PB).

Cliff Swallow - 50 on 13 April attempting to nest on bridge over Jon (CP); 30+ on 19 April at LBL (JB, PB, CL); 10 at nest on 14 May at Mel (FR).

Fish Crow - Eight along levee at Hic and four at West on 24 April (CP).

Red-breasted Nuthatch - Male carrying food on 20 May at Swif and one on 22 May (TR).

House Wren - One on 12 March, an early date, at CKWA (WD); three on 4 May at BNP (JB, PB).

Bewick's Wren - One on 10 May at Brown Park, Jefferson County (JB, PB).

Golden-crowned Kinglet - three on 15 March at Ber (JB, PB).

Ruby-crowned Kinglet - 20 on 21 April at BNP (JB, PB).

Blue-gray Gnatcatcher - Three on 2 April in Lau (CB); 10 on 12 April at Slo and Aud (JB, PB); 30 on 21 April at BNP (JB, PB); nest found on 10 May at EBP (LMc).

Veery - Two on 4 May at BNP (JB, PB); one on 9 May at Mar (LMc); three on17 May at BCNP (LMc).

Gray-cheeked Thrush - One on 17 May at Bur (LMc).

Swainson's Thrush - 10 on 4 May at BNP (JB, PB); one at Hopkins County farm from 10 to 20 May (JWH).

Hermit Thrush - One on 2 April in Lau (CB); two on 21 April and 6 May in Jefferson County (JB, PB).

Wood Thrush - Three on 19 April at MCNP (JB, PB, CL); nest was located on 26 May at BCNP (LMc).

Brown Thrasher - Three on 20 March in Mad (JWH).

American Pipit - Six on 6 April and four on 20 April at Che (JB, PB, DC, CL).

Cedar Waxwing - 45 on 22 April in Lexington (WD); 15 on 31 May at Ber (JB, PB, DC).

Loggerhead Shrike - One at UK on 19 March (WD); three along levee on 2 April near Hic (CP).

White-eyed Vireo - First heard in Mad on 1 April in Lau (CB); 10 on 19 April at LBL (JB, PB, CL).

Solitary Vireo - Possible courting pair on 2 April in Lau (CB); one on 28 April at BNP (JB, PB); a pair showing territorial behavior on 24 May at Swif (LMc).

Yellow-throated Vireo - Five on 19 April at LBL (JB, PB, CL); two on 26 April at MCNP (JB, PB).

Red-eyed Vireo - Five on 26 April at MCNP (JB, PB); first observed in Mad on 30 April (JWH).

Warbler movement was generally fair, but late due to weather. Most common species were reported across the state.

Tennessee Warbler - Observed near Mad from 30 April to 20 May (JWH).

Nashville Warbler - 10 on 10 May at BCNP (LMc).

Northern Parula - Four on 20 May and three on 22 May at Swif (FR).

Chestnut-sided Warbler - 10 on 10 May at BCNP (LMc).

Magnolia Warbler - Seven on 10 May at BCNP (LMc).

Cape May Warbler - One to three from 5 to 16 May at Bur (LMc).

Black-throated Blue Warbler - One near Ber on 2 May (AR, TR); one on 9 May at Mar and two at BCNP on 10 May (LMc).

Yellow-rumped Warbler - Last recorded in Mad 1 May (JWH).

Black-throated Green Warbler - 10 in sw Lau on 2 April (CB); 20 on 20 May and 6 on 22 May at Swif (FR).

Blackburnian Warbler - Seven on 10 May at BCNP (LMc).

Yellow-throated Warbler - Seven in sw Lau on 2 April (CB).

Black-and-White Warbler - Six on 20 May and eight on 22 may at Swif (FR).

Ovenbird - First heard in Mad area on 1 May (JWH); 10 on 20 May and

10 on 22 May at Swif (FR).

Northern Waterthrush - On 9 May single birds were seen at Bur and at Mar with 2 at Steele's Bottom, Gallatin County (LMc); three on 10 May at EBP ((LMc).

Louisiana Waterthrush - One on 11 April on a Mad farm (JWH); one on 2 May at Ber (AR, TR).

Canada Warbler - One on 17 May at BCNP (LMc).

Worm-eating Warbler - Three on 22 May at Swif (FR); four on 26 May at BCNP (LMc).

Swainson's Warbler - Two on 20 May at Swif (FR); two on 24 May at Swif (LMc).

Hooded Warbler - 10 on 22 May at Swif (FR).

Summer Tanager - One on 19 May at LBL, one on 4 May at Wav and one at Bern on 31 May (JB, PB, DC, CL); one in song in Mad (JWH).

Scarlet Tanager - Two on 4 May at BNP (JB, PB);

Rose-breasted Grosbeak - Male and female at Mad feeder from 30 April to 18 May (JWH); three on 4 May at BNP (JB, PB); seven at feeder from 4 to 20 May in Murray (CP).

Blue Grosbeak - One on 18 May at Fer (CT, DT); male present in Mad from 3 May to 29 May (JWH); one male at airport, Pendleton County and two along AA Highway, Bracken County on 30 May (FR).

Dickcissel - One in Oldham County on 4 May and 6 May (JB, PB); three from 10 to 26 May at Pet (LMc); birds singing at three Logan County sites, number is increasing (SK).

Vesper Sparrow - One on 25 March at MCFH (FB, LK); one on 2 April at reclaimed stipmine in Lau (CB).

Savannah Sparrow - Eight on 12 May at Slo (JB, PB); one on 10 May at EBP (LMc).

Grasshopper Sparrow - One on 24 May in Lexington (AT, TR).

Lincoln's Sparrow - One on 8 May at BNP (JB, PB).

Swamp Sparrow - Six on 12 April at Slo (JB, PB); three on 10 May at a Pet marsh (LMc).

White-throated Sparrow - Last seen on 23 April at Fer (CT, DT); last observed in Mad on 10 May (JWH).

White-crowned Sparrow - One to three at a Mad feeder from 4 to 17 May (JWH); one on 17 May at Fer (CT, DT).

Dark-eyed Junco - 46 were present on 15 March at Ber (JB, PB); last observed on 16 April in Mad (JWH); one on 3 May at Highland Cemetery, Kenton County (LMc).

Lapland Longspur - Three on 27 March at McEl (DR).

Bobolink - One on 3 May at the Greater Cincinnati Airport (LMc); six from 3 to 10 May in Logan County (SK); seven on 4 May in Oldham County and three on 6 May at BNP (JB, PB); 100+ on 9 May along levee at Hic (CP); five on 19 May and six on 22 May were singing and

displaying near Canewood in Clark County (FR); six in Lexington on 24 May (AR, TR).

Orchard Oriole - Seven on 3 May at Greenwood Park, Louisville and three on 4 May at BNP (JB, PB); one was building a nest near Pet on 26 May (LMc).

Baltimore Oriole - One in Mad which is unusual for the area, from 4 to 17 May (JWH).

Brewer's Blackbird - Over 300 at McEl on 25 March (DR).

Purple Finch - 31 on 16 March and three on 26 April at MCNP and two on 24 April at BNP (JB, PB); four on 2 April at Lau feeder (CB).

Red Crossbill - Five on 15 March at Bern (JB, PB).

No reports of Evening Grosbeaks.

Contributors - Jane Bell (JB), Pat Bell (PB), Clay Black (CB), Fred Busroe (FB), Kathy Caminiti (KC), Hap Chambers (Hap), Dona Coates (DC), Wayne Davis (WD), James W. Hancock (JWH), Logan Kistler (LK), Steve Kistler (SK), Lewis Kornman (LK), Celia Lawrence (CL), Lee McNeely (LMc), Clell Peterson (CP), Frank Renfrow (FR), Art Ricketts (AR), Tina Ricketts (TR), David Roemer (DR), Carroll Tichenor (CT), Doris Tichenor (DT)

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COMPARISON OF LONG-EARED AND SHORT-EARED OWL WINTER FOOD HABITS ON A RECLAIMED STRIPMINE IN WESTERN KENTUCKY

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Surface mining for coal is responsible for much wildlife habitat loss, yet mine reclamation efforts have created new habitat with the potential to support a variety of wildlife. Birds which were once documented as rare to uncommon transients or winter residents in Kentucky, specifically Short-eared (*Asio flammeus*) and Long-eared owls (*A. otus*), have been reported nesting on reclaimed stripmines in the western part of the state (Ohio and Muhlenberg counties (Monroe *et al.* 1988, Stamm and Clay 1989, Palmer-Ball 1994). While nesting has been confirmed, information concerning how both species of owl use reclaimed surface mine habitat in the Commonwealth is lacking. Clay (1994) reported the food habits of Short-eared Owls on an old (20+ years since reclamation) reclaimed mine site in what is now the Homestead Wildlife Management Area, Ohio County.

The purpose of this study was to examine the food habits of Short-eared and Long-eared owls on reclaimed surface mines in the same geographical area of western Kentucky and attempt to determine if the owls were functioning as generalist or specialist predators within the reclaimed ecosystem.

Earhart and Johnson (1970) established that Short-eared Owls feed

mainly on small mammals (particularly species of *Microtus*, *Lemmus*, *Peromyscus*, *Mus*, *Rattus*, and *Reithrodontomys*) and infrequently on birds and insects. In Kentucky only three studies of Short-eared Owl feeding habits have been reported. Fisher (1983) identified meadow mice (*Microtus ochrogaster*) in the stomach of one Short-eared Owl from Union County. Brown (1989) analyzed a Short-eared Owl pellet from Fayette County and found it contained 4% birds and 96 % mammals (percent occurrence). The author described the mammalian remains as either microtines or "pest rodents" (*i.e.*, families Cricetidae and Muridae), while the bird remains were "blackbirds" (*i.e.*, familes Sturnidae and Icteridae). Clay (1994) collected 124 Short-eared Owl pellets at the Homestead Wildlife Management Area in Ohio County. The pellets contained 41 prairie voles (*Microtus ochrogaster*), 81 meadow voles (*M. pennsylvanicus*), one Indigo Bunting (*Passerina cyanea*) and one Horned Lark (*Eremophila alpestris*)(Clay 1994).

Long-eared Owls feed primarily on small mammals, especially *Microtus* (Earhart and Johnson 1970). Only one study of Long-eared Owl food habits has been conducted in Kentucky. In Madison County, Abel and Ritchison (1995) reported the pellets of Long-eared Owls contained 111 prey items. They noted meadow voles comprised 75.5% (N=84) of all prey consumed. Other prey items included prairie voles (17.1%, N=19), harvest mice (*Reithrodontomys humulis*) (2.7%, N=3), short-tailed shrews (*Blarina brevicauda)* and one unidentified bird (Abel and Ritchison 1995).

STUDY AREAS

This study was conducted at the Peabody Wildlife Management Area (PWMA) in Ohio County, and the Kentucky National Guard Training Site (KNGTS) in Muhlenberg County, Kentucky. The areas are located between Pond River, and Central City, Kentucky; north of the Western Kentucky Parkway and south of Kentucky State Highway 70.

Short-eared Owl pellets were collected on the PWMA, which was reclaimed in 1993 and lies adjacent to an active strip pit. The roosting site of the Short-eared Owls was located within a vegetated depression between two low hills. The roost was adjacent to a small ephemeral pond, which contained fragmitites (*Phragmites communis*) and cattails (*Typha latifolia*).

Long-eared Owl pellets were collected on the KNGTS which was reclaimed in 1978. The Long-eared roosting site was located in a small (0.9 ha) Virginia pine stand bordered by a pond on the south end, a stand of autumn olive to the west, multiflora rose (*Rosa multiflora*) dominated the plant community to the east and, to the north, a grassland field consisting mainly of broomsedge (*Andropogon virginicus*), Kentucky 31 fescue (*Festuca arundinaceae*), and Korean Lespedeza (*Lespedeza striata*).

MATERIALS AND METHODS

Owl pellet collection occurred monthly from December 1994 through March 1995 (specifically December 16, January 14, February 11, and March 11).

Pellets were collected from roosting areas and dried in an oven at 148°C for 24 hours. In order to separate hair and feathers from bone fragments, pellets were picked apart by hand. Only skulls and mandibles were used to identify mammal remains, while both skulls and feathers were used for the identification of bird remains. A stereoscopic dissecting microscope was used to identify skull and mandible remains to the species-level using taxonomic keys (Glass 1973, Barbour and Davis 1974) and reference material from the Eastern Kentucky University (EKU) mammal collection. When feathers and avian skeletal remains were encountered in pellets, they were compared to material in the EKU avian collection and identified to the lowest taxonomic level possible. Once prey remains were identified, a frequency of occurrence measurement was calculated. The number of animals found in all pellets were summed and divided by the total number of pellets collected. Since there was more than one prey item in a pellet, percentages were greater than 100%.

Small mammals were collected at each study site by using Sherman live traps, Victor snap traps, and Museum Special snap traps. Sherman live traps were used at the KNGTS during a pre-study trapping survey which was performed during November 22-26, 1994. The survey was conducted to determine if the Catch-Effort Method (Krebs 1989) could be used to estimate small mammal abundance. In an area in which Long-eared Owls were observed hunting, 100 traps were placed in a square area ten meters apart. Traps were baited with a mixture of rolled oats and peanut butter. Animals captured during the first trapping period were marked by trimming the hair on different legs to denote a different day of capture. All animals caught and marked were considered removed from the population.

Analysis of the data collected from the pre-study trapping survey revealed that the assumptions of the Catch-Effort Method [*i.e.*,population is closed, probability of each individual being caught in a trap is constant throughout the trapping period, and all individuals have the same probability of being caught (Krebs 1989)] could be met. Therefore, from January 8-14, 1995, Victor and Museum Special snap traps were used to estimate prey abundance on each site. The Short-eared Owl small mammal trap site was located 20 m east of the roost location, while the Long-eared Owl trap site was located 5 m west of the roost (all trap locations were in areas in which the owls had been observed hunting). Traps were placed in the same grid pattern as that described for the pre-study trapping survey. Traps were checked daily and animals captured were identified to species and (if possible) subspecies (according to Burt and Grossenheider 1980). Identified animals were then weighed and standard museum measurements recorded (*i.e.*, tail length, hind foot length, ear length, and total length).

RESULTS

On December 16 nine Short-eared Owls were flushed from a common

TABLE 1 - Prey species composition from Long-eared and Short-eared Owl pellets found at Peabody Wildlife Management Area, Ohio County and the Kentucky National Guard Training Site, Muhlenberg County, Kentucky.

Sample dates	M.o.	P.m.b.	S.c.	S.l.	C.p.	M.m.	B.	unk.	Total Pellets*
Long-eared Owl									
12/15/94	41	2	10	3	0	2	3	2	52
1/14/95	89	0	24	17	7	4	6	1	111
2/11/95	97	0	36	11	1	0	7	3	136
3/11/95	108	12	36	0	1	2	2	5	151
Total	335	14	106	31	9	8	18	11	450
Short-eared Owl									
12/15/94	136	10	2	4	0	0	9	3	124
1/14/95	57	0	1	2	0	2	8	1	56
2/11/95	56	0	1	1	0	0	2	2	48
3/11/95	191	5	4	1	0	1	4	3	170
Total	440	15	8	8	0	3	23	9	466

Abbreviations: M.o. = *Microtus ochrogaster*, P.m.b. = *Permoyscus maniculatus bairdii*, S.c. = *Synaptomys cooperi*, S.l.= *Sorex longirostris*, C.p. = *Cryptotis parva*, M.m. = *Mus musculus*, B. = Birds, and unk. = unknown.

* More than one prey item found in pellets.

TABLE 2 - Snap trapping data from January 8-14, 1995 at the Peabody Wildlife Management Area, Ohio County, and Kentucky National Guard Training Site, Muhlenberg County, Kentucky.

Date	P. m.b.	M.o.	S.c.	M.m.	S.l.
PWMA Total number of animals caught = 90					
9	18	2	0	1	0
10	8	5	1	1	0
11	12	11	2	4	0
12	1	7	3	3	0
13	3	6	1	0	0
14	1	0	0	0	0
Total	43	31	7	9	0
KNGTS Total number of animals caught = 79					
9	11	6	2	0	0
10	2	6	5	0	3
11	5	12	4	0	1
12	3	8	0	0	0
13	1	5	0	0	0
14	2	2	0	0	1
Total	24	39	11	0	5

Abbreviations: see TABLE 1.

TABLE 3. Average standard museum measurements for small mammals snaptrapped January 8-14, 1995 at Peabody Wildlife Management Area, Ohio County and the Kentucky National Guard Training site, Muhlenberg County, Kentucky.

PWMA	Number	Weight (g)	Total length (mm)	Tail length (mm)	Hind foot l. (mm)	Ear length (mm)
M. ochrogaster	43	44.4	159.7	38.0	19.0	11.1
P. maniculatus bairdii	31	20.5	128.9	43.1	17.7	14.0
S. cooperi	7	31.0	138.0	18.1	18.4	9.8
M. musculus	9	22.2	141.4	78.3	16.8	14.1
S. longirostris	0					
KNGTS						
M. ochrogaster	24	45.6	166.3	37.6	20.2	12.0
P. maniculatus bairdii	39	22.3	132.1	44.5	18.2	15.7
S. cooperi	11	34.0	143.4	19.9	19.7	10.2
M. musculus	0					
S. longirostris	5	3.0	104.6	29.7	12.9	1.3

area from January through March 1995. Four Long-eared Owls were flushed from a common roosting site at KNGTS, and their numbers did not fluctuate from December through March 1994-95.

The total number of pellets collected for analysis was 916 (450 Long-eared Owl pellets and 466 Short-eared Owl pellets). The monthly number of pellets collected varied due to weather conditions. The prairie vole was the prey item found with the greatest occurrence in both owls' pellets, 48% for Long-eared Owls and 50% for Short-eared Owls (Table 1). Thirteen Long-eared Owl pellets contained bird remains, of which fragments representing the taxonomic families Fringillidae, Phasianidae, Sturnidae, and Tyranidae were identified. Twenty Short-eared Owl pellets contained bird remains, all of which were unknown passerines except for some fragments identified as belonging to the Icteridae family.

Total abundance of small mammals in a 10,000 m^2 area before snap trapping was estimated to be 133 animals at the PWMA, and 107 animals at KNGTS ($CI_{95} = \pm 5.41$). Prairie voles were the most abundant animal trapped at the KNGTS with 49%, while prairie deer mice (*Peromyscus maniculatus bairdii*) dominated at the PWMA with 48% (Table 2). Jaccard's coefficient of community similarity (J) indicated the small mammal species composition between sites was fairly similar ($J = 0.60$).

Comparing the sizes of the two most abundant small mammals captured on either study site, prairie voles were significantly ($P<0.05$) heavier than deer mice (PWMA: $t=2.87$, KNGTS: $t=3.24$) and significantly longer (total length) than deer mice (PWMA: $t=3.70$, KNGTS: $t=4.10$) (Table 3).

DISCUSSION

Small mammals in the genus *Microtus* exhibit, in general, three types of demographic patterns: annual fluctuations, multi-annual cycles, and both in sequence (Taitt and Krebs 1985). These population cycles are postulated to be the result of density-dependent and density-independent relationships (Ostfeld and Canham 1995). Density-independent factors impacting microtine population cycles have been reported to include weather, food availability, moisture, ground cover and habitat (Krebs and Myers 1974, Taitt and Krebs 1985). Density-dependent factors influencing vole population sizes are thought to include reproduction, survival rates and growth rates (Ostfeld and Canham 1995).

Because my abundance sampling of the prairie vole populations on KNGTS and the PWMA represented a "point in time" and did not include any measurements of density-dependent or density-independent factors, my data would not have reflected whether a particular site's population was at a demographic high or low, hence designating either Short-eared or Long-eared owls on my study areas as specialists or generalists is difficult.

Short-eared Owls in this study appeared to feed selectively on prairie voles, while Long-eared Owls consumed prairie voles in an opportunistic fashion. However, I believe both owl species actually fed selectively on prairie voles. This hypothesis is based on the population dynamics exhibited by prairie voles (as discussed above), and the activity pattern and physical size of prairie voles. Voles have peaks of activity which coincide with the peak hunting times of Short-eared Owls, which would make them more susceptible to predation (Clark 1975). Marks (1984) postulated that Long-eared Owls consume prey in relation to the prey's physical size rather than seeking a particular species of prey. Perhaps the owls employ an optimal foraging strategy (Smith 1990) in which they attempt to maximize the amount of energy gained per unit of energy expended; hence enhancing overall fitness. In my study, Long-eared and Short-eared owls consumed those small mammal species (*i.e.*, prairie voles and southern bog lemmings, *Synaptomys cooperi*) which were not only the most abundant but also the largest (and theoretically the most rewarding energy-wise).

While this study demonstrates that reclamation practices currently employed in western Kentucky can create habitat capable of supporting food chains involving Short-eared and Long-eared owls, it must be emphasized that suitable roost sites were available on each study area. With roost sites that provided protection from inclement winter weather and protection from the wind chill generated by strong winds, both species of owl could use the food sources available and apparently maintain a positive energy balance. Without the on-site presence or near proximity of roosting habitat, it is doubtful the owls would have been present on the reclaimed areas. Future surface mine reclamation practices in western Kentucky should include the preservation or establishment of interspersed tracts of forest juxtaposed with reclaimed areas in order to benefit Short-eared and Long-eared owls.

LITERATURE CITED

Abel, V.J. and G. Ritchison. 1995. Prey use by Long-eared and Eastern Screec-owls in central Kentucky. *Kentucky Warbler* 71: 72-75.

Barbour, R.W. and W.H. Davis. 1974. Mammals of Kentucky. University Press of Kentucky, Lexington, KY. 322pp.

Brown, R.K. 1989. Food habits of Kentucky owls. *Kentucky Warbler* 65:38-48.

Burt, W.H. and R.P. Grossenheider. 1980. A field guide to the mammals of North America north of Mexico. Houghton Mifflin Co., New York, NY. 289 pp.

Clark, R.J. 1975. A field study of the Short-eared Owl, *Asio flammeus* (Pontoppidan), in North America. *Wildlife Monographs* 47: 1-67.

Clay, K. 1994. A study of Short-eared Owl pellets in Ohio county. *Kentucky Warbler* 70:44.

Earhart, C.M. and N.K. Johnson. 1970. Size dimorphism and food habits of North American owls. Condor 72:251-264.

Fisher, A.K. 1893. The hawks and owls of the United States. USDA Bulletin Num ber 3, Washington, D.C. 220pp.

Glass, B.P. 1973. A Key to the Skulls of North American Mammals, 2nd ed., Okla homa State University, Stillwater. 54pp.

Krebs, C.J. 1989. Ecological methodology. Harper Collins Publications, New York, New York. 654pp.

_____ and J.H. Myers. 1974. Population cycles in small mammals. *Advances in Ecological Research* 8:267-399.

Marks, J.S. 1984. Feeding ecology of breeding Long-eared Owls in southwestern Idaho. *Canadian Journal of Zoology* 62: 1528-1533.

Monroe, B.L. Jr., A.L. Stamm and B.L. Palmer-Ball. 1988. Annotated checklist of the birds of Kentucky. The Kentucky Ornithological Society 244 pp.

OstSeld, R.S. and C.D.Canham. 1995. Density-dependent processes in meadow voles: an experimental approach. *Ecology* 76:521-532.

Palmer-Ball, B. Jr. 1994. First reported nesting of Long-eared Owls in Kentucky. *Kentucky Warbler* 70:42-43.

Smith, R.L. 1990. Ecology and Field Biology, 4th edition. Harper Collins, New York, NY. 922pp.

Stamm, A.L. and K.W. Clay. 1989. First breeding record of the Short-eared Owl in Kentucky. *Kentucky Warbler* 65:75-76.

Taitt, M.J., and C.J. Krebs. 1985. Population dynamics and cycles. Pages 567-620 *in* R. H. Tamarin (ed.) Biology of New World *Microtus*. American Soci ety of Mammalogists Special Publication No. 8.

1997 KENTUCKY MIDWINTER EAGLE SURVEY

Laura Burford and Jim Durell

The 1997 Midwinter Eagle Survey (MES) marked the twentieth year Kentucky has been monitoring eagle populations as part of nationwide survey efforts. As in past years, Kentucky's highest concentrations of wintering eagles occurred at TVA's Land Between the Lakes, Dale Hollow Lake and the Mississippi River. Since the early 1970's Bald Eagle (*Haliaeetus leucocepalus*) populations have been increasing with the banning of the pesticide DDT and widespread restoration efforts. As a result, additional survey routes have been added. Thirty nine different routes are currently surveyed in the state for wintering eagles.

The survey window for the 1997 National MES was January 1 through 15, with target dates set for January 10 and 11. Due to inclement weather in many parts of the state, ice on the roads prevented some ground surveys. Other routes were not censused due to insufficient funds and observer illness. Weather during the survey period was highly variable. Cool temperatures during the early part of the month caused ice cover to occur on inland sloughs (sometimes as high as 15-20%), but the Mississippi and Ohio rivers remained clear. Daytime temperatures varied from 8 degrees to 69 degrees during the survey period, with precipitation ranging from flurries to rain. Eagles were undoubtedly on the move during the survey period, as were waterfowl. Waterfowl concentrations were highest after the survey period had ended.

With double counting taken into consideration, final tabulation indicated 271 Bald Eagles in the state, 194 (71.3%) adults and 74 (27.2%) immature, while 3 (0.01%) were not identified to age. There were no Golden Eagles (*Aquila chrysaetos*) reported during the census period. Four eagles were not identifiable to species or age class, but were included in the total for a final count of 275 eagles. Both the total number of eagles and the age distribution are comparable to values for the past three years, suggesting a relatively stable wintering population.

Table 1 summarizes the total number of eagles recorded for each route (with all observers, excluding double counts) by age class. Routes where no eagles were counted, or where eagles were counted outside the survey period are not included. Other routes run where no eagles were reported were: Barren River, Buckhorn Lake, Carr Fork Lake, Dewey Lake, Fishtrap Lake, Fox Creek, Herrington Lake,

Kentucky River, Bluegrass Army Depot, Martin's Fork Lake, Ohio River: Louisville to Covington, Ohio River: Covington to Ashland, Paintsville Lake, Rough River Lake and Yatesville Lake.

TABLE 1. Kentucky Midwinter Eagle Census Summary, 1997. Totals by route represent the number of birds recorded during January 1 to 15 survey period **only**, with adjustments made for double counts. Only routes where birds were recorded are listed.

ROUTE	BALD EAGLES				Grand	1996	Earlier Record	
	Ad	Im	Unk	Total	Total	Total	High	Year
Ballard WMA	5	12		17	17	18	56	1990
Bernheim Forest		1		1	1	2	9	1993
Cave Run Lake	3	1		4	4	3	10	1989
Dale Hollow Lake (KY portion)	16	3	3	22	22	13	38	1989
Grayson Lake	2	1		3	3	0	4	1993
Green River Area	3			3	3	0	4	1992
Green River Lake	5	3		8	11*	3	13	1994
LBL (KY Portion)	93	29		122	122	98	154	1994
Lake Cumberland	11	4		15	15	33	33	1996
Mississippi River	29	3		32	32	40	72	1984
Nolin River Lake					1*	0	3	1990
Ohio:Wickliffe to Carrsville	18	12		30	30	17	89	1986
Ohio: Henderson to Brandenburg		1		1	1	1	4	1994
Ohio: Brandenburg to Louisville	4	2		6	6	4	5	1986
Reelfoot Lake NWR	4	2		6	6	4	21	1989
Taylorsville Lake	1			1	1	2	2	1996
TOTAL 1997	194	74	3	271	275	258#		

*Green River Lake reported three eagles and Nolin River Lake reported one eagle, all of which could not be identified to species or age class.

The total for 1996 includes some routes not reported here.

Little information was returned regarding the sightings of other raptors.

This census was undertaken by 114 participants representing Bernheim Forest, Indiana Department of Natural Resources, Kentucky Department of Fish and Wildlife Resources, Kentucky Ornithological Society, Kentucky State Parks, Kentucky State Police, Murray State University, National Park Service, Somerset Bird Club, Tennessee Ornithological Society, Tennessee Valley Authority (Land Between the Lakes), U.S. Department of the Army, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Forest Service and

Tennessee Wildlife Resources Agency, as well as several private citizens.-- Department of Fish and Wildlife, 1 Game Farm Road, Frankfort, KY 40601 and 308 Meadow Lane, Frankfort, KY 40601.

FIELD NOTE

Winter Wren at Big Black Mountain

On 9 July 1996, while conducting a bird survey on Big Black Mountain, Harlan County, Kentucky, I observed a Winter Wren (*Troglodytes troglodytes*). The survey transect was located near an area of Big Black Mountain known as The Doubles at an elevation between 3800 and 3880 ft.

At approximately 1300 h, I encountered a small wren moving about the roots of a tree which had been exposed as a result of road construction. The wren was about 8-9 cm in length, had a short upturned tail, slightly decurved bill, a faint superciliary line, a barred belly and an overall dark color. The wren was also singing and giving call notes. Confirmation of the wren's identity was made possible because: 1) I am from Michigan's Upper Penninsula and have had many encounters with the species and its vocalizations, and 2) I was able to compare this individual's songs and calls with those on a compact disc (Cornell Laboratory of Ornithology 1990) which I had with me. The bird was also bobbing its head regularly, a behavior common with the species. I observed the bird for about twelve minutes. I made three visits to the same area over the next day and a half and was unable to relocate the bird.

The Winter Wren has been previously documented twice in Kentucky during summer months (Monroe *et al.* 1988- Annotated Checklist of Birds of Kentucky, Monroe 1994, The Birds of Kentucky). One record is of a juvenile collected in 1939 by Barbour (1941-*Kentucky Warbler* 17:46-47) on Big Black Mountain. The other record is of a juvenile seen by E. Clark in 1961 near Whitesburg, Letcher County. Mengel (1965- The Birds of Kentucky) stated that there may be a possibility of breeding Winter Wrens on Black Mountain. Summer populations, apparently, have been supported on High Knob, Wise County, Virginia, at similar elevations (Murray 1952). High Knob is located 15 miles from Big Black Mountain. Mengel (1965-The Birds of Kentucky) noted however, that High Knob has a vegetative structure composed of hemlock (*Tsuga canadensis*) and other conifers, different than Big Black Mountain, which may prevent them from being a more common species in the area. --- THOMAS E. OLIVER, Biology Department, Eastern Kentucky University, Richmond, Kentucky 40475.

NEWS AND VIEWS

North American Migration Counts

This past spring, eight Kentucky counties were included in the North American Migration Counts, held throughout the United States on May 10. Conduct of these counts is synchronized to help gain a snapshot of migration on a given day across the continent. Results were received from the following counties: Ballard, Boone, Campbell, Daviess, Fayette, Hart, Jefferson and Nicholas. Six

recorded over 100 species led by Boone County with 139, Jefferson County with 132 and Fayette County with 120.

The date for the 1997 fall North American Migration Count is September 20. Anyone interested in participating should contact Lee McNeely, P.O. Box 463, Burlington, Kentucky 41005 (Phone: 606-586-7520). Counts must be held on the above date in a specific county. New counts are encouraged, even if participation is limited.

Reminder of the Kentucky Rare Bird Alert Hotline

Remember, the Kentucky Rare Bird Alert hotline is in service at 502-894-9538. Brainard Palmer-Ball, Jr. regularly updates the tapes with your reports of unusual bird sightings from around the state. Help support this service with your reports.

K.O.S Burt L. Monroe, Jr. Avian Research Grant Fund

Persons that need money (*i.e.*, up to $500) to assist them in conducting research on birds in Kentucky should contact the K.O.S. Burt L. Monroe, Jr. Avian Research Fund Committee c/o Blaine Ferrell, Department of Biology, Western Kentucky University, Bowling Green, Kentucky 42101 (email: Ferrebr@wku.edu) for a set of guidelines and an application form.

Kentucky Bird Records Committee

Rare bird sightings and birds observed out of season should be well documented and the documentation should be sent to Lee McNeely, Secretary of the KBRC (P.O. Box 463, Burlington, Kentucky 41005) for consideration by the committee for official state record status.

K.O.S. Fall Meeting

The fall meeting of the Kentucky Ornithological Society will meet October 3 through 5 at Pine Mountain State Park. Please make plans to attend. The meeting will feature a hawk watch at the Cumberland Gap as part of the Saturday morning field trips. If you plan on presenting information at the Friday evening meeting, please contact Wendell Kingsolver, Shepherd Hill, Carlisle, Kentucky.

K.O.S. Field Trips

Mammoth Cave National Park - September 27 at 7:00 a.m. at noon at Mammoth Cave for fall migrants. Meet at the visitor's center of Mammoth Cave National Park at 7:00 a.m. CDT. The leader is Steve Kistler (502-524-1095).

Sloughs Wildlife Management Area- Sunday, October 12 at the Sloughs Wildlife Management Area, Henderson County for water birds and fall migrants. Meet at the Holiday Inn off I-65 in Clarksville, Indiana at 7:00 a.m. EDT for carpooling or meet at McDonald's in Henderson at 9:00 a.m. EDT. Bring a lunch and shoes for wading. The leader is Brainard Palmer-Ball, Jr. (502-426-8549).